REMARKS

Claim Objections Under 35 U.S.C. § 103(a)

Claims 18-25, 27-34 and 55 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Keely et al.* (hereinafter *Keely*) in view of the admitted art, substantially for the reasons set forth in section 3 of Paper No. 3 and section 2 of Paper No. 6, and further modified by additional observations.

The Examiner acknowledges that *Keely* does not expressly teach the use of solid particles, porous particles and combinations thereof and takes official notice that it is old and well known that non-adhesive solid particles can be used to form repositionable pressure sensitive adhesive sheets. The Examiner refers to *Ochi* for support and states that it would have been obvious to modify *Keely's* repositionable adhesive sheet by substituting the hollow glass bubbles of *Keely* with the non-adhesive solid particles of *Ochi* having the equivalent size and crush resistance.

The Examiner takes the position that the motivation to make such a modification to *Keely* is found in the desire to obtain a pressure sensitive adhesive having both removable and repositionable properties, as taught by *Keely* a column 3, lines 17-18. While the Examiner is correct the he must find motivation in the prior art to combine two references, why would one of ordinary skill in the art look to *Ochi* to modify *Keely* to solve a problem already solved by *Keely*? If one desired to obtain a pressure sensitive adhesive having both removable and repositionable properties, there is no need to modify *Keely*. As noted by the Examiner, this is taught by *Keely* at column 3, lines 17-18. Applicant respectfully maintains that the motivation to make the

proposed modification is found in the disclosure of the present application and not in the prior art..

Further, there is no teaching in either *Keely* or *Ochi* of non-adhesive solid particles having the equivalent size and crust resistance of the *Keely* hollow glass bubbles. Specifically, there is no teaching of the "crush resistance of at least 10 psi" set forth in the present claims. Tellingly, neither reference uses the term "crush resistance."

In fact, *Ochi* teaches away from crushable particles and teaches away from the equivalent sized particles. At col. 3, lines 1 to 11, *Ochi* states that "the hollow thin-walled fragile microballoons collapsible under pressures applied at the time of bonding ... tend to remain on the bonding surface of the adhesive as relatively large fragments which ... adversely affect the adhesion strength." At col. 3, lines 61 to 68, *Ochi* states "that the aforesaid defects and disadvantages of the prior techniques can be overcome by using non-adhesive solid particles which ... have much smaller particle size than the microballoons or microbubbles previously proposed." *Ochi* states at col. 4, lines 1 to 21, "the defects and disadvantages of the prior techniques can be overcome by a structure in which non-adhesive solid particles which have an average particle diameter small enough to withstand collapsing or breaking under the pressure applied during bonding .... More specifically, we have found that ... solid particles having a particle diameter less than the thickness of the pressure-sensitive adhesive layer ... permit easy registering of the adhesive layer with a desired site of bonding on the surface of a substrate and as required to make possible relocation of the adhesive layer." At column 7, lines 3 to 13, *Ochi* states that the "non-adhesive solid particles used in this invention have a diameter smaller than the thickness of the adhesive layer. ... In order to cause them to perform this function fully, the

ratio of the thickness (μ) of the adhesive layer to the average diameter (μ) of the solid particles is preferably at least 2." Therefore, it would not be obvious substitute the *Keely* bubbles with the *Ochi* solid particles "with equivalent size and crush resistance" as argued by the Examiner.

Still further, the hollow glass bubble of *Keely* do not have the "crush resistance of at least 10 psi" set forth in the present claims. At col. 6, lines 30 to 32, *Keely* does state that for "the preferred hollow glass bubbles 106, there is an eighty percent (80%) survival at a pressure of 250 psi." However, the preceding sentence states that the "strength of the hollow glass bubbles 106 is measured using a nitrogen pressure test." This is a static crush test in which the bubbles are subjected to a uniform pressure over their entire surface and the not dynamic load test described in the present specification in which the particles are subjected to a load that generates forces between the apex and bottom of the particle.

As stated in paragraph 5 of the Declaration of Kean Anspach, dated September 17, 2002, hollow glass beads with much higher crushing strength than that disclosed in *Keely* "proved fragile and crushed too easily to be spaced far apart." Therefore, the hollow glass bubbles of *Keely* have a "crush resistance," as defined by the present application, of less than 10 psi. Therefore, if the hollow glass bubbles of *Keely* were substituted with the solid particles of *Ochi* having equivalent size and crush resistance, as suggested by the Examiner, the crush resistance limitation of the present claims would not be met.

Claim 21 requires the particles to have a diameter about equal to or greater than the thickness of the adhesive layer. Claim 22 requires the particles to have a diameter at least greater than the thickness of the adhesive layer. As discussed above, *Ochi* teaches solid particles having a diameter less than the thickness of the pressure-sensitive adhesive layer. Therefore, claims 21

and 22 are allowable over the combination of *Keely* and *Ochi* for this reason as well. Without a suggestion in the prior art, it is impermissible to pick and choose features such as the solid structure of the *Ochi* particles and the diameter and crush resistance of the *Keely* hollow glass bubbles. In fact, it is doubted that such solid particles (having the size and crush resistance of *Keely*) exist.

Claim 28 requires the particles to be "collapsible or fragile under conditions employed for pressure-bonding the surface covering to a desired site of bonding." If the solid particles of *Ochi* were substituted for the hollow glass bubbles of *Keely*, this limitation would not be met. As stated at col. 4, lines 5 and 6, of *Ochi*, the solid particles "withstand collapsing or breaking under the pressure applied during bonding." Therefore, claim 28 is allowable over the combination of *Keely* and *Ochi* for this reason as well. Again, without a suggestion in the prior art, it is impermissible to pick and choose features such as the solid structure of the *Ochi* particles and the diameter and crush resistance of the *Keely* hollow glass bubbles.

With respect to the issue of a species anticipating a genus of a Markush group, Applicant and Examiner are in agreement. If "hollow particles" were listed as a species of a generic Markush group, the hollow glass bubbles of *Keely* would anticipate the Markush group genus. However, the Markush group of present claim 18 is limited to "solid particles, porous particles and combinations thereof." Therefore, *Keely* does not anticipate the claims and the Examiner's rejected is based on Section 103(a).

Applicant urges that the present application is now in a condition for allowance and an early notice to such effect is earnestly solicited. However, if it is believed that any issues remain

unresolved in the present application, Applicant requests that the Examiner contact the undersigned.

Respectfully submitted,

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Date

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, PO Box 1450, Alexandria, Virginia 222313-1450 on: 7/10/03.
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